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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/685,265      | 10/14/2003  | Haruhisa Masuda      | 1376-03             | 4015             |

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IP DEPARTMENT OF PIPER RUDNICK LLP  
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1650 MARKET ST  
PHILADELPHIA, PA 19103

EXAMINER

DUNWOODY, AARON M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3679

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/685,265

Applicant(s)

MASUDA ET AL.

Examiner

Aaron M Dunwoody

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/14/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) filed 10/14/2003 is being considered by the examiner.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the polyamide resin tube being a multilayer tube with a barrier layer must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement

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Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Objections***

Regarding claim 2, the phrase "and/or" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "and/or"), thereby rendering the scope of the claim(s) unascertainable.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 6540264, Yokoyama et al in view of US patent 6258927, Oka et al.

In regards to claim 1, Yokoyama et al disclose a fuel pipe joint having excellent fuel permeation resistance, using a joint material. Yokoyama et al does not disclose the joint material comprising a polyamide (nylon 9T) consisting of a dicarboxylic acid component and a diamine component, with 60 to 100 mol% of the dicarboxylic acid component being terephthalic acid and 60 to 100 mol% of the diamine component being a diamine component selected from 1,9-nonanediamine and 2-methy1-1,8-octanediamine. Oka et al teach a joint material comprising a polyamide (nylon 9T) consisting of a dicarboxylic acid component and a diamine component, with 60 to 100 mol% of the dicarboxylic acid component being terephthalic acid and 60 to 100 mol% of the diamine component being a diamine component selected from 1,9-nonanediamine and 2-methy1-1,8-octanediamine, to have good flame retardancy and heat resistance, and exhibit good thermal stability and continuous moldability when molded in melt, and it can be molded into good moldings having excellent appearances, especially fine color tone, without giving much gas (col. 1, lines 7-11). As Oka et al relates to polyamide compositions used in connectors, it would have been obvious to one having ordinary skill

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in the art at the time the invention was made to fabricate the joint with a joint material comprising a polyamide (nylon 9T) consisting of a dicarboxylic acid component and a diamine component, with 60 to 100 mol% of the dicarboxylic acid component being terephthalic acid and 60 to 100 mol% of the diamine component being a diamine component selected from 1,9-nonanediamine and 2-methyl-1,8-octanediamine, to have good flame retardancy and heat resistance, and exhibit good thermal stability and continuous moldability when molded in melt, and it can be molded into good moldings having excellent appearances, especially fine color tone, without giving much gas, as taught by Oka et al.

In regards to claim 2, Yokoyama et al in view of Oka et al disclose a fuel pipe joint having excellent fuel permeation resistance, using a joint material comprising a polyamide resin composition comprising from 50 to 99 parts by weight of a polyamide (nylon 9T) and from 1 to 50 parts by weight of another polyamide resin or another thermoplastic resin, the polyamide (nylon 9T) consisting of a dicarboxylic acid component and a diamine component, with 60 to 100 mol% of the dicarboxylic acid component being terephthalic acid and 60 to 100 mol% of the diamine component being a diamine component selected from 1,9-nonanediamine and 2-methyl-1,8-octanediamine.

In regards to claim 3, Oka et al discloses the joint material further comprising areinforcement.

In regards to claim 4, Oka et al discloses the joint material further comprising an electrically conducting filler.

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In regards to claim 5, Oka et al discloses the electrically conducting filler having an aspect ratio of 50 or more and a short diameter of 0.5 nm to 10 gm.

In regards to claim 6, Oka et al discloses the joint material further comprising a reinforcement and an electrically conducting filler at a ratio of 1:3 to 3:1 by weight.

In regards to claim 7-11, Yokoyama et al discloses a fuel pipe quick connector comprising a cylindrical body.

Claims 12-13 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al in view of Oka et al as applied to claims 1-11 above, and further in view of WO 93/925835, Noone et al.

In regards to claim 12, Yokoyama et al in view of Oka et al disclose the claimed invention including a joint body having first and second end portions, from the first to second end portions of the joint body a continuous hollow portion being formed, the first end portion of the joint body being able to sealingly engage with a first tube, the second end portion of the joint body being able to liquid-tightly engage with a male-type second tube, wherein the joint body is made of the joint material. Yokoyama et al in view of Oka et al do not disclose a resin first tube. Noone et al teach a resin first tube which has been employed in the past (pg. 1, lines 10-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a resin first tube which has been employed in the past, as taught by Noone et al.

In regards to claim 13, Yokoyama et al disclose the first end portion of the joint body being formed as a nipple (14).

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In regards to claim 16, Yokoyama et al disclose an O-ring around the hollow portion at the second end portion of the joint body in order to liquid-tightly engage with the male-type second tube.

In regards to claim 17, Noone et al disclose the second tube being a resin tube.

In regards to claim 18, Yokoyama et al in view of Oka et al disclose the second tube having a flange portion and the fuel pipe quick connector further comprising a retainer (19) inside the fuel joint body at the second end portion thereof for engaging with and retaining the flange portion of the second tube.

In regards to claim 19, Yokoyama et al in view of Oka et al disclose the retainer being made of the joint material.

In regards to claim 20, Yokoyama et al disclose a fuel pipe component obtained by joining the quick connector with a polyamide resin tube by a welding method selected from spin welding, vibration welding, laser welding and ultrasonic welding.

Note, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, the limitation, joining the quick connector with a polyamide resin tube by a welding method selected from spin welding, vibration welding, laser welding and ultrasonic welding, has been given little patentable weight.

In regards to claim 21, Noone et al disclose the polyamide resin tube being a multilayer tube comprising a barrier layer.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al in view of Oka et al and further in view of Noone et al, and further in view of Patent Application Publication US2003/0137148 A1, Andre et al.

In regards to claim 14, Yokoyama et al in view of Oka et al and further in view of Noone et al disclose the claimed invention except an O-ring around the nipple of the first end portion of the joint body. Andre et al teach an O-ring (52) around the nipple (36) of the first end portion of the joint body (26) to seal the nipple with a flexible tube. As Andre et al relates to fluid connector, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an O-ring around the nipple of the first end portion of the joint body to seal the nipple with a flexible tube.

In regards to claim 15, Andre et al disclose the nipple of the first end portion of the joint body having a plurality of protruded barbs on an outer peripheral surface thereof.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 6540264, Yokoyama et al in view of Patent Application Publication US2003/023008 A1, Uchida et al.

In regards to claim 1, Yokoyama et al disclose a fuel pipe joint having excellent fuel permeation resistance, using a joint material. Yokoyama et al does not disclose the joint material comprising a polyamide (nylon 9T) consisting of a dicarboxylic acid component and a diamine component, with 60 to 100 mol% of the dicarboxylic acid component being terephthalic acid and 60 to 100 mol% of the diamine component being

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a diamine component selected from 1,9-nonanediamine and 2-methy1-1,8-octanediamine. Uchida et al teach a joint material comprising a polyamide (nylon 9T) consisting of a dicarboxylic acid component and a diamine component, with 60 to 100 mol% of the dicarboxylic acid component being terephthalic acid and 60 to 100 mol% of the diamine component being a diamine component selected from 1,9-nonanediamine and 2-methy1-1,8-octanediamine, to have good flame retardancy and heat resistance, and exhibit good thermal stability and continuous moldability when molded in melt, and it can be molded into good moldings having excellent appearances, especially fine color tone, without giving much gas (col. 1, lines 7-11). As Uchida et al relates to polyamide compositions used in connectors, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the joint with a joint material comprising a polyamide (nylon 9T) consisting of a dicarboxylic acid component and a diamine component, with 60 to 100 mol% of the dicarboxylic acid component being terephthalic acid and 60 to 100 mol% of the diamine component being a diamine component selected from 1,9-nonanediamine and 2-methy1-1,8-octanediamine, to have good flame retardancy and heat resistance, and exhibit good thermal stability and continuous moldability when molded in melt, and it can be molded into good moldings having excellent appearances, especially fine color tone, without giving much gas, as taught by Uchida et al.

In regards to claim 2, Yokoyama et al in view of Uchida et al disclose a fuel pipe joint having excellent fuel permeation resistance, using a joint material comprising a polyamide resin composition comprising from 50 to 99 parts by weight of a polyamide

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(nylon 9T) and from 1 to 50 parts by weight of another polyamide resin or another thermoplastic resin, the polyamide (nylon 9T) consisting of a dicarboxylic acid component and a diamine component, with 60 to 100 mol% of the dicarboxylic acid component being terephthalic acid and 60 to 100 mol% of the diamine component being a diamine component selected from 1,9-nonanediamine and 2-methyl-1,8-octanediamine.

In regards to claim 3, Uchida et al discloses the joint material further comprising areinforcement.

In regards to claim 4, Uchida et al discloses the joint material further comprising an electrically conducting filler.

In regards to claim 5, Uchida et al discloses the electrically conducting filler having an aspect ratio of 50 or more and a short diameter of 0.5 nm to 10 gm.

In regards to claim 6, Uchida et al discloses the joint material further comprising a reinforcement and an electrically conducting filler at a ratio of 1:3 to 3:1 by weight.

In regards to claim 7-11, Yokoyama et al discloses a fuel pipe quick connector comprising a cylindrical body.

Claims 12-13 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al in view of Uchida et al as applied to claims 1-11 above, and further in view of WO 93/925835, Noone et al.

In regards to claim 12, Yokoyama et al in view of Uchida et al disclose the claimed invention including a joint body having first and second end portions, from the

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first to second end portions of the joint body a continuous hollow portion being formed, the first end portion of the joint body being able to sealingly engage with a first tube, the second end portion of the joint body being able to liquid-tightly engage with a male-type second tube, wherein the joint body is made of the joint material. Yokoyama et al in view of Uchida et al do not disclose a resin first tube. Noone et al teach a resin first tube which has been employed in the past (pg. 1, lines 10-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a resin first tube which has been employed in the past, as taught by Noone et al.

In regards to claim 13, Yokoyama et al disclose the first end portion of the joint body being formed as a nipple (14).

In regards to claim 16, Yokoyama et al disclose an O-ring around the hollow portion at the second end portion of the joint body in order to liquid-tightly engage with the male-type second tube.

In regards to claim 17, Noone et al disclose the second tube being a resin tube.

In regards to claim 18, Yokoyama et al in view of Uchida et al disclose the second tube having a flange portion and the fuel pipe quick connector further comprising a retainer (19) inside the fuel joint body at the second end portion thereof for engaging with and retaining the flange portion of the second tube.

In regards to claim 19, Yokoyama et al in view of Uchida et al disclose the retainer being made of the joint material.

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In regards to claim 20, Yokoyama et al disclose a fuel pipe component obtained by joining the quick connector with a polyamide resin tube by a welding method selected from spin welding, vibration welding, laser welding and ultrasonic welding.

Note, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, the limitation, joining the quick connector with a polyamide resin tube by a welding method selected from spin welding, vibration welding, laser welding and ultrasonic welding, has been given little patentable weight.

In regards to claim 21, Noone et al disclose the polyamide resin tube being a multilayer tube comprising a barrier layer.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al in view of Uchida et al and further in view of Noone et al, and further in view of Patent Application Publication US2003/0137148 A1, Andre et al.

In regards to claim 14, Yokoyama et al in view of Uchida et al and further in view of Noone et al disclose the claimed invention except an O-ring around the nipple of the first end portion of the joint body. Andre et al teach an O-ring (52) around the nipple (36) of the first end portion of the joint body (26) to seal the nipple with a flexible tube. As Andre et al relates to fluid connector, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an O-ring around the nipple of the first end portion of the joint body to seal the nipple with a flexible tube.

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In regards to claim 15, Andre et al disclose the nipple of the first end portion of the joint body having a plurality of protruded barbs on an outer peripheral surface thereof.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because it illustrates the inventive concept of the invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M Dunwoody whose telephone number is 703-306-3436. The examiner can normally be reached on 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P Stodola can be reached on 703-306-5771. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

.amd

A handwritten signature in black ink, appearing to read 'A. Dunwoody', is positioned above the printed name.

**Aaron Dunwoody**  
**Patent Examiner**  
**Technology Center 3670**